

# Field Report

## DeSoto National Wildlife Refuge

### ■ 1.0 Summary

DeSoto National Wildlife Refuge was established in 1959 to preserve habitat for migratory waterfowl and is located along the Missouri River, approximately 25 miles north of Omaha, Nebraska and five miles west of Missouri Valley, Iowa. The Refuge is comprised of 7,823 acres and lies in the Missouri River Valley floodplain on a former meander of the Missouri River.

#### Welcome Sign at DeSoto National Wildlife Refuge



The Refuge is immediately adjacent to Wilson Island State Recreation Area, an Iowa Department of Natural Resources facility. This 577-acre area offers overnight camping, hiking trails, picnic spots along with hunting and fishing in their respective seasons. Wilson Island also provides boat access to the Missouri River.

In July 1981, a Visitor Center was opened in DeSoto National Wildlife Refuge that also serves as an exhibit hall for thousands of artifacts excavated from the sunken remains of the steamboat Bertrand that was discovered on the grounds of the Refuge in 1968.

Transportation concerns identified by Refuge Management include the following:

- **Flooding** – Flooding at the Refuge creates a number of problems with the transportation system. Parking lots have been closed due to flooding along with boat access sites to DeSoto Lake. Hiking trails have also been closed due to flooding.

- **Unpaved Roadways** – Approximately six of the 12 miles of roadways on the Refuge are unpaved. There is a concern amongst Refuge staff that dust from the unpaved roadways generally detracts from a visitor’s experience and creates a safety hazard as vehicles are frequently pulled over to the side of the road, (often without a shoulder), and create a potential hazard for passing cars.
- **Unpaved Parking Lots and Pull-Offs** – Many of the parking lots within the Refuge are not paved. Additionally, there are a limited number of areas where motorists can pull off to the side of the road to observe wildlife and most of these areas are unpaved.
- **Congestion Along U.S. Highway 30** – Vehicles travel along the highway, then pull off to the side to watch the snow geese, resulting in congestion and unsafe conditions along the highway.

No need for an Alternative Transit System (ATS) has been identified at this site.

## ■ 2.0 Background Information

### 2.1 Location

DeSoto National Wildlife Refuge is located along the Missouri River, approximately 25 miles north of Omaha, Nebraska and five miles west of Missouri Valley, Iowa. The boundaries of the Refuge fall within two States – Iowa and Nebraska. Figure 1 shows a map of the Refuge.

### 2.2 Administration and Classification

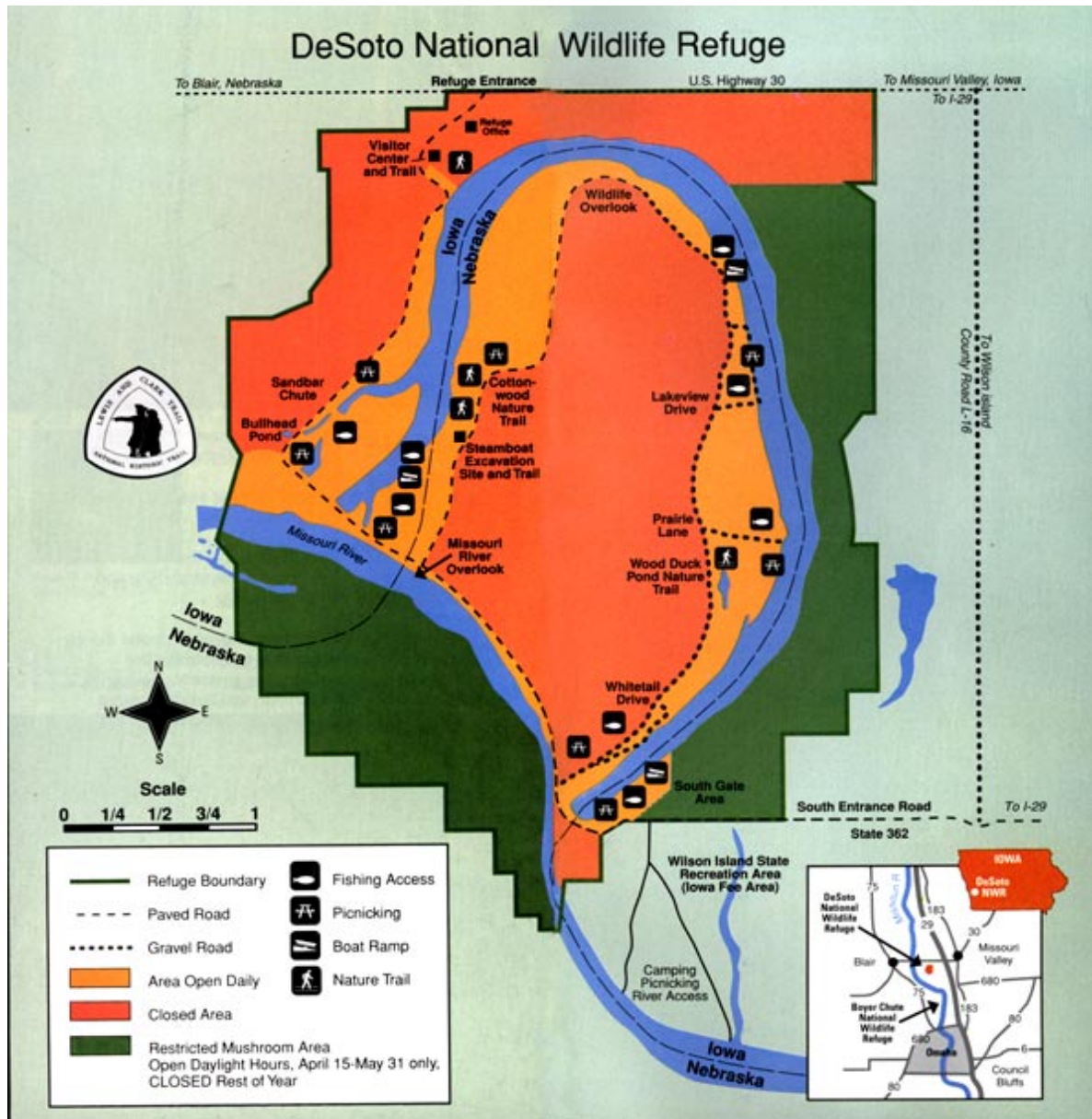
The Refuge was established in 1959 to preserve habitat for migratory waterfowl and is managed by the Region 3 of the USFWS. George Gage is the Refuge Manager and Bruce Weber is the Outdoor Recreation Planner.

### 2.3 Physical Description

The Refuge covers 7,823 acres and lies in the Missouri River Valley floodplain on a former meander of the Missouri River. Much of the Refuge is characterized by cottonwood bottomlands, approximately 2,000 acres are in agricultural food plots, and nearly 1,500 acres have been reestablished to grasslands.

The Refuge has 12 miles of roads with approximately half paved and the remainder unpaved. Approximately two miles of trails are maintained in the Refuge, with most of the trails unpaved.

Figure 1. Refuge Map



In the heart of the Refuge is DeSoto Lake, a 750-acre oxbow lake created in 1960 when the U.S. Army Corps of Engineers constructed a new, straighter and shorter channel for the Missouri River.

In July 1981, a Visitor Center was opened that also serves as an exhibit hall for thousands of artifacts excavated from the sunken remains of the steamboat Bertrand that was discovered on the grounds of the Refuge in 1968.

The Refuge is immediately adjacent to Wilson Island State Recreation Area, an Iowa Department of Natural Resources facility. This 577-acre area offers overnight camping,

hiking trails, picnic spots along with hunting and fishing in their respective seasons. Wilson Island also provides boat access to the Missouri River.

## **2.4 Mission and Goals of the Wildlife Refuge**

The Refuge was established in 1959 to preserve habitat for migratory waterfowl which remains its primary mission. To meet its mission, the following management programs have been established, each with a set of goals and objectives:

- **Wildlife** – The primary goal and function of the refuge is serve as a stopover for migrating waterfowl. The refuge provides open water for resting areas and food plots for feeding. Management for these cover types also benefit other wildlife such as deer and wild turkey. The refuge also provides wood duck nesting structures and sandbar habitat for piping plovers and least terns.
- **Fishery** – DeSoto Lake hold numerous fish species that attract sport fishing to the area. The refuge provide and maintains three boat launch sites within the refuge as well as a number of fishing piers on DeSoto Lake. The holds populations of largemouth bass, bluegill, catfish, crappie, northern pike and walleye. Fishing is open during the regular state fishing season.
- **Public Use** – The refuge offers a variety of public uses within the refuge. Wildlife viewing is popular during the fall waterfowl migration. However, at other times of the year visitors can enjoy boating, fishing, nature trails, mushroom picking and environmental education programs. The Visitor Center is geared towards wildlife observation, education and also holds the Bertrand Museum Collection.

## **2.5 Visitation Levels and Visitor Profile**

Since the Refuge opened in 1959, the annual number of visits has ranged from 13,800 in 1960 to a peak of 473,000 in 1982. In 1998, approximately 263,000 people visited the Refuge and represented a seven percent increase from 1997. This figure includes approximately 8,000 school children who visit the Refuge each year as part of school field trips. In 1998, records indicate that people from every State plus 50 foreign countries visited the Refuge.

It is estimated that over one-half of the visitors come from the Council Bluffs/Omaha area while approximately one-third of the visitors make a stop after seeing signs to the Refuge posted on nearby Interstate 29, approximately five miles from the Refuge. The average visit lasts approximately two to three hours. Approximately 100 motorcoach tours stop at the Refuge each year.

## ■ 3.0 Existing Conditions, Issues and Concerns

### 3.1 Transportation Conditions, Issues and Concerns

Approximately two-thirds of the visitors enter the Refuge from U.S. Highway 30 to the north with the remainder of the visitors entering the south gate, immediately adjacent to the Wilson Island State Recreation Area.

As noted earlier, there are approximately 12 miles of roadway within the Refuge and approximately two miles of trails. In addition, there are parking lots located in strategic locations throughout the Refuge along with areas for visitors to pull off the road and observe wildlife.

The size of the parking lot for the visitor center is designed to accommodate the capacity of the visitor center. Generally, if the parking lot is full, then the visitor center is at capacity. Manually operated gates control vehicle access to the parking lot.

#### Unpaved Road Within DeSoto National Wildlife Refuge



Specific areas of concern related to transportation that were raised by refuge management include the following:

- **Flooding** – Flooding at the Refuge creates problems with the transportation system in a number of ways. Parking lots have been closed due to flooding along with boat access sites to DeSoto Lake. Hiking trails have also been closed due to flooding. Closures of parking lots, boat access and trails have lasted up to several months resulting in a significant inconvenience for visitors. The water level of DeSoto Lake can be manually controlled, however, if water levels are up on the Missouri River, then DeSoto Lake cannot be drained into the River.



- **Unpaved Roadways** – Approximately six of the 12 miles of roadways on the Refuge are unpaved. There is a concern amongst Refuge staff that dust from the unpaved roadways generally detracts from a visitor's experience and creates a safety hazard as vehicles are frequently pulled over to the side of the road, (often without a shoulder), and create a potential hazard for passing cars.
- **Unpaved Parking Lots and Pull-Offs** – Many of the parking lots within the Refuge are not paved. Refuge staff indicated that paved parking areas could better accommodate visitors who park within the grounds of the Refuge. Additionally, there are a limited number of areas where motorists can pull off to the side of the road. Most of these areas are unpaved within the Refuge.
- **Congestion Along U.S. Highway 30** – Two-thirds of the visitors to the Refuge arrive by U.S. Highway 30 from the north. This stretch of highway marks the northern border of the Refuge and becomes congested during the peak migration of snow geese – generally during the month of November. Vehicles travel along the highway, then pull off to the side to watch the snow geese, resulting in congestion and unsafe conditions along the highway.

### **3.2 Community Development Conditions, Issues and Concerns**

Tourism is an important part of the area's economy and the Missouri Valley Chamber of Commerce promotes the Refuge as a tourist attraction. The Council Bluffs (Iowa) Chamber of Commerce also promotes the Refuge as a tourist attraction. Approximately one-third of the visitors stop by the Refuge after seeing signs posted on nearby Interstate 29, approximately five miles from the Refuge.

### **3.3 Natural or Cultural Resource Conditions, Issues and Concerns**

Since the primary goal of the refuge is to provide a safe haven for waterfowl and other wildlife, improvements to the road, trail and parking areas within the refuge would need to be designed to minimize the impact on existing wildlife habitat and management practices. Paving of roadways and trails in their current locations would have minimal impact on wildlife habitat and would reduce the impacts of dust on most wildlife within the refuge.

### **3.4 Recreation Conditions, Issues and Concerns**

Immediately adjoining the Refuge is the Iowa Department of Natural Resources' Wilson Island State Recreation Area. This 577-acre area has 140 campsites along with boat access to the Missouri River. The camping and boat access to the Missouri River are services not available at the Refuge and provide a nice compliment to the amenities offered by the Refuge. A good working relationship has been established between staff at the Refuge and Wilson Island State Recreation Area.

Flooding conditions have prevented visitors from using all the resources available at the Refuge. In particular, trails, parking lots and boat access have all been temporarily closed due to flooding. The flooding conditions can last several months and close certain facilities for an entire season.

## ■ 4.0 Planning and Coordination

### 4.1 Unit Plans

In 1987, a concept plan was developed that provides a brief overview of the history and management of the Refuge, recent issues, trends and long-term goals. The plan described ongoing management philosophy and how the Refuge was meeting its current objectives. The plan did not recommend any new direction in management policy or changes to the basic goals of the Refuge.

During the last two years, the Refuge has enhanced its interpretive services for visitors and hopes to continue in that direction. One of the ways Refuge staff hopes to accomplish this goal is to introduce more information kiosks along the roadside.

Refuge management would like to raise the elevation of roads, trails, parking areas and boat accesses that are most commonly effected by flooding.

### 4.2 Public and Agency Coordination

Staff at the Refuge maintains an ongoing dialogue with the Missouri Valley Chamber of Commerce and provides printed materials such as brochures for promotional uses.

## ■ 5.0 Assessment of Need and System Options

### 5.1 Magnitude of Need

As noted earlier there were four areas of need identified by Refuge Management. These are summarized below.

- **Flooding** – Parking lots have been closed due to flooding along with boat access sites to DeSoto Lake. Hiking trails have also been closed due to flooding. Closures of parking lots, boat access and trails have lasted up to several months resulting in a significant inconvenience for visitors.

## Flooded Boat Landing at DeSoto National Wildlife Refuge



- **Unpaved Roadways** – About six of the 12 miles of roadways on the Refuge are unpaved. This is a concern amongst Refuge staff that dust from the unpaved roadways generally detracts from a visitor's experience and creates a safety hazard as vehicles are frequently pulled over to the side of the road, (often without a shoulder), and create a potential hazard for passing cars.
- **Congestion Along U.S. Highway 30** – Two-thirds of the visitors to the Refuge arrive by U.S. Highway 30 from the north. This stretch of highway marks the northern border of the Refuge becomes congested during the peak migration of snow geese – generally during the month of November. Vehicles travel along the highway, then pull off to the side to watch the snow geese, resulting in congestion and unsafe conditions along the highway.
- **Unpaved Parking Lots and Pull-Offs** – Many of the parking lots within the Refuge are not paved. Refuge staff indicated that paved parking areas would better accommodate visitors who park within the grounds of the Refuge. Additionally, there are a limited number of areas where motorists can pull off to the side of the road. All these areas are unpaved within the Refuge.

## Unpaved Parking Area at DeSoto National Wildlife Refuge





## **5.2 Range of Feasible Transit Alternatives**

Developing and providing transit alternatives at the Refuge does not appear to be a necessary solution for the existing conditions or for conditions expected in the next five to 10 years.

Potential enhancements to the existing transportation system include the following:

- Placing portable changeable message signs along U.S. Highway 30 during periods of high congestion. These signs would warn motorists of slow moving traffic and encourage cautious driving.
- Diverting traffic to the south entrance. During periods of peak congestion on U.S. Highway 30, vehicles could be directed to enter the Refuge at the south entrance, avoiding the traffic on Highway 30.
- Pave the approximately six miles of what is now gravel roadway.
- Pave approximately six parking lots within the Refuge, each with an estimated average capacity of 30 cars.
- Pave approximately two miles of dirt trails.
- Pave pull-off areas, both internal to the refuge and (perhaps) along U.S. Route 50 as well.

## **■ 6.0 Bibliography**

U.S. Fish & Wild Life Service – National Wildlife Refuge System Web Site (<http://refuges.fws.gov>).

DeSoto National Wildlife Refuge Concept Plan, Circa 1987.

DeSoto Visitation Figures, 1959-1998, as provided by Bruce Weber.

## **■ 7.0 Persons Interviewed**

Bruce Weber, DeSoto Outdoor Recreation Planner

Kathy Purcell, Missouri Valley, Iowa Chamber of Commerce